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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,036	10/21/2003	Hiroshi Teramoto	086142-0569	2968

22428 7590 04/12/2006

FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER

BROWN, DREW J

ART UNIT	PAPER NUMBER
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3616

DATE MAILED: 04/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

This Office Action is in response to the amendment filed on 2/10/06. Claims 1, 9, and 20 have been amended, and new claims 21 and 22 have been added.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6, 8-14, 16, and 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dinsdale et al. (U.S. Pat. No. 6,820,898 B2) in view of Smith (U.S. Pat. No. 6,846,013 B2).

With respect to claims 1, 9, and 10, Dinsdale et al. discloses an airbag positioned to inflate along an interior side of a vehicle (Figure 1). A tube, or elongated pipe, containing an inert (column 14, line 1) pressurized gas (column 15, lines 21-24) is configured to extend along the side of the vehicle in the longitudinal direction of the vehicle. There are a plurality of spaced apart openings (170, 172) along the length of the tube positioned to allow the pressurized gas to enter and inflate the airbag, and a plurality of inflation devices (100a, 100b) are connected to the tube at opposite ends, wherein each inflation device produces an exhaust gas for further pressurizing the pressurized gas. The openings are also sealed until the inert gas reaches a predetermined pressure.

With respect to claim 20, Dinsdale et al. discloses an airbag positioned to inflate along an interior side of a vehicle, where a pipe has a sealed opening (178e, 178f) at each end and extends in the longitudinal direction of the vehicle along the upper part of the airbag and is configured to conform to the shape of the upper part of the airbag, wherein the pip is filled with pressurized gas. Dinsdale also discloses a pair of inflation devices that are connected to the tube, wherein each inflation device includes an initiator and a booster propellant for producing an exhaust gas

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for further pressurizing the pressurized gas, wherein each inflation device is positioned in one of the sealed openings located at both ends of the pipe (Figure 3) so that the initiator can receive a triggering signal from a control device when the occurrence of a vehicle collision is detected by a sensor (column 7, lines 3-8).

With respect to claims 1 and 20, Dinsdale et al. discloses that additional inflators may be used to inflate additional protection zones (column 8, lines 19-25), but does not disclose that the length of the tube substantially corresponds to the length of the airbag in the longitudinal direction of the vehicle.

Smith, however, does disclose that the length of a tube (12) substantially corresponds to the length of the airbag in the longitudinal direction of the vehicle (Figure 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Dinsdale et al. in view of the teachings of Smith to extend the inflator tube to a length that substantially corresponds to the length of the airbag in order to minimize the manufacturing and assembling costs by limiting the number of inflators used to one in order to protect all desired protection zones.

With respect to claim 9 and 20-22, Dinsdale et al. discloses that the elongated pipe comprises a circumferential surface and two opposite ends, but does not disclose a plurality of spaced apart openings at a plurality of different distances from one of the ends of the pipe along the circumferential surface of the pipe.

Smith, however, does disclose a plurality of spaced apart openings (16) at a plurality of different distances from one of the ends of the pipe along the circumferential surface of the pipe (Figure 2A). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Dinsdale et al. to have a plurality of openings on the circumferential surface of the pipe in order to evenly inflate the airbag along its entire length.

With respect to claims 2, 6, and 11, Dinsdale et al. discloses that each opening is covered by a frangible seal (178a, 178b) configured to break when the pressurized gas reaches a predetermined pressure and thereby releases the gas into the airbag. The openings are positioned to face in generally opposite directions so that gas exiting the tube and entering the airbag through the openings enters the airbag in generally opposing directions (Figure 3).

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With respect to claims 3-5, 16, and 17, Dinsdale et al. discloses that each of the inflation devices is located in an end of the tube (Figure 3), includes an igniter (104), and includes a cap containing a booster propellant (column 15, lines 46-49).

With respect to claim 8, Smith discloses that the length of the tube corresponds generally to the distance between A and C pillars of the vehicle (Figure 1).

With respect to claims 12-14, the inflator further comprises a gas inlet (88) for charging the inert gas into the pipe. The gas inlet is sealed (89) by a ball weld (column 14, lines 40-46).

A plurality of gas outflow openings in the pipe are positioned along the length of the pipe to allow the pressurized gas to enter and inflate the airbag, wherein the gas outflow openings are sealed until the pressurized gas reaches a predetermined pressure.

With respect to claims 18 and 19, Dinsdale et al. also does not disclose that a caulking material seals the ends of the pipe. However, it is conventional in the art to use a caulking material to create a watertight or airtight seal. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Dinsdale et al. to seal the ends of the pipe with a caulking material so the pressures of each side of the airbag near the corresponding igniters are the same so the airbag inflates uniformly.

3. Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dinsdale et al. in view of Smith, and further in view of Stevens et al. (U.S. Pat. No. 6,296,274 B1).

The combination of Dinsdale et al. and Smith discloses the claimed invention as discussed above but does not disclose that the tube is curved along its length.

However, Stevens et al. does disclose that the tube is curved along its length. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the invention of Dinsdale et al. in view of the teachings of Stevens et al. to curve the tube in order to conform to the shape of the vehicle. This allows the airbag to take up the least amount of space in the vehicle as possible by allowing it to run along the roof rail of the vehicle.

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Response to Arguments

4. Applicant's arguments with respect to claims 1, 9, and 20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sutherland and Webber disclose similar elongated pipes.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Drew J. Brown whose telephone number is 571-272-1362. The examiner can normally be reached on Monday-Thursday from 8 a.m. to 4 p.m..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Drew J. Brown
Examiner
Art Unit 3616

DJB
4/11/06



DAVID R. DUNN
PRIMARY EXAMINER